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BROADBAND ANTENNA, FILTER AND DETECTOR SYSTEMS

**Purpose:** To develop a system of antennas, filters and detectors for the 50 MC to 40,000 MC frequency range.

**Personnel:** Electrical Engineers:

25X1

Mathematician:

25X1

**Status:** Investigation of the filter network has continued. Development of a compact 50 MC to 500 MC LP antenna has been initiated. The art work for the 500 MC to 10,000 MC printed circuit LP antenna has been continued. The first model will be ready for pattern and impedance investigation by the second week of the next period. Work has continued on the 10,000 MC to 40,000 MC horn antenna, detector and dielectric waveguide inserts.

The customer furnished video amplifiers have been received. The operating characteristics are, however, questionable at this time.

**Future Plans:** Work in all phases will continue. Radiation patterns and impedance characteristics of the 500 MC to 10,000 MC antenna will be determined. Modifications may be in order if it is found that the epoxy circuit board on which the antenna is printed exhibits unsatisfactory electrical characteristics at the high frequency end of the range. The modification predicted would be to print the antenna on a teflon backed circuit board.

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